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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,317	04/21/2004	Philippe Gruber	111858.01	4218
25944	7590	08/03/2005	EXAMINER	
OLIFF & BERRIDGE, PLC			ROSS, DANA	
P.O. BOX 19928			ART UNIT	
ALEXANDRIA, VA 22320			PAPER NUMBER	

3722

DATE MAILED: 08/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Pat

Office Action Summary	Application No. 10/828,317	Applicant(s) GRUBER ET AL.	
	Examiner Dana Ross	Art Unit 3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/21/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: The disclosure contains inconsistent terminology with reference to the claimed invention. For example, Applicant is referred to page 6, lines 3 and 7, where reference number 14 is defined as both “the continuation” (line 3) and “the extension shaft” (line 7). Page 5, lines 26 and 32, reference an “intermediate axial shaft 9” and “intermediate shaft 9”, respectively.

Applicant is required to review the disclosure to ensure consistent terminology is used throughout the disclosure and claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Examiner will address some of the issues by example only. The below is not all inclusive of the 35 USC 112 issues.

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The claims are replete with lack of antecedent terminology. For example, Claim 1 recites the limitation "the spindle", "the quill", "the free end", "the crown wheel", "the sun gear", "the upper planet pinion", etc.

Claims 2 and 3 recite "the first epicyclical gear train".

Claim 3 recites "the motor".

There is insufficient antecedent basis for these limitations in the claim. Furthermore, the above is only a sampling of the lack of antecedent terminology found in the claims. Applicant is required to review all claims to ensure proper antecedent basis for all terminology.

Claim 1, line 6, it is not clear what is being claimed by the terminology "an axial shaft". The disclosure (page 5, lines 21-34) references an "intermediate axial shaft 9" and "intermediate shaft 9". It is not clear if this is the same "axial shaft" as is being claimed. For the purpose of this examination, the claimed "axial shaft" will be the "intermediate axial shaft" or "intermediate shaft" of the disclosure.

Claim 1, line 13, it is not clear what is being claimed by the phrase "meshing of its rack". It is not clear what "its" is referring to. For the purpose of this examination, the rack will be considered the rack 4 of the disclosure.

Claim 1, line 15, it is not clear what is being claimed by the term "the free end of the carriage". For the purpose of this examination, the free end will be considered the end opposite the end attached to the spindle.

Claim 1, line 25 it is not clear what is meant by "free to rotate in the cage and meshing". Applicant is referred to lines 13 and 22 where the terms meshing and meshes are used. For purpose of examination, the cage will be considered cage 20. It is not clear what is being claimed

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by the term “meshing” in line 25. For purposes of this examination, the “meshing” will be considered the meshing of the claimed pinions of the first train, such that the stepped planet pinions 26 and 27 on shaft 28, with pinion 26 meshing with a set of teeth 29 and the pinion 27 meshing with gear 30 (see disclosure page 6, lines 25-30).

Furthermore, as to the claim language of the “first train” limitations, for purpose of this examination, the claim language will be interpreted to mean the train will be carrying “at least two superposed planet pinions, an upper and lower pinion, mounted so that they are free to rotate in the cage, said upper pinion with a set of teeth formed around the axial shaft and said lower pinion meshing with an output sun gear”.

Claim 1, line 31, it is not clear what is being claimed by “the upper planet pinion of at least one set of superposed planet pinions”. For purposes of examination, the “upper planet pinion” will be the upper planet pinion 36 meshing with sun gear 39.

Claim 1, line 33, it is not clear what is being claimed by “a continuation of the body”. For purpose of examination, the “continuation” will be considered the extension shaft 14 of the disclosure.

Claim 1, line 37, it is not clear what is being claimed by “this carriage”. For the purpose of examination, all references to a “carriage” will be the carriage 16 disclosed in the specification. Furthermore, it is not clear what the phrase “is distinct from the set of teeth that collaborates with the rack of this carriage” means.

The above is not all-inclusive. Applicant is required to review all claims to ensure compliance with 35 USC 112 2nd Paragraph.

All claims will be examined “as best understood”.

Allowable Subject Matter

4. Claims 1-3 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

5. Examiner notes that since all claims have been examined "as best understood" due to the numerous 35 USC 112 issues with the current claim language, the following reasons for allowance may be withdrawn in the next office action due to clarification of Applicant's claimed invention.

The following is an examiner's statement of reasons for allowance: The prior art neither anticipates, nor renders obvious a boring head with cutting advance independent of rotation as claimed in independent claim 1, specifically wherein the combination of limitations include a first and second train as claimed with the first train with a cage (20) mounted so that it can rotate about the axial shaft (9) and a crown wheel, wherein the crown wheel (22) meshes with a pinion (23) fitted onto the shaft (24a) of an electric motor (24) carried by the body, the train carrying at least two superposed planet pinions (26,27) mounted so that they are free to rotate in the cage and meshing, in the case of the upper one, with a set of teeth formed around the axial shaft, and in the case of the lower one, with an output sun gear (30); and where the sun gear (39) of the second train is secured to the output sun gear (30) of the first train and meshes with the upper planet pinion (36) and the upper and lower planet pinions (36 and 37) are free to rotate in a continuation (14) of the body (7) with the lower planet pinion (37) meshing with a set of teeth formed on the driving pinion (19) of the carriage (16).

US Pat. No. 6,533,508 (Nonaka) teaches a machining apparatus with a spindle 4, holding shaft 5 which can move radially, housing 7, shank 2, and tool 1.

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'508 does not teach the transmission of the rotational movement by the driving pinion of the carriage provided by two epicyclical gear trains in cascade as is currently claimed.

Therefore '508 does not anticipate the claimed invention of independent claim 1.

The use of epicyclical gear trains as actuators is well known in the art as is taught by US Pat. No. 4,932,929 (Capewell). '929 teaches an actuator with three compound epicyclic gear trains driven by a hollow shaft 90 (see col. 3, line 67-col. 4, line 15), crown wheels 75, 76 (see col. 3, lines 26-35), differential device with sun gears 53 and 40, and planet gears 41 (see fig. 6 and col. 2, lines 31-48).

'929 does not disclose the specifics of the machine tool or of a first or second train as claimed, specifically wherein the first train has a cage mounted so that it can rotate about the axial shaft and the crown wheel meshes with a pinion fitted to the shaft of an electric motor, the first train carrying at least two superposed planet pinions mounted so that they are free to rotate in the cage and meshing with the upper pinion with a set of teeth formed around the axial shaft and the lower pinion meshing with an output sun gear or the second train secured to the output sun gear and meshing with an upper planet pinion and the lower planet pinion meshing with a set of teeth formed on the driving pinion of the carriage.

Therefore '929 does not anticipate the claimed invention of claim 1.

Furthermore, there is no prior art, either alone or in combination with '508 or '929 that would render obvious the claimed invention. Though the machine tool with cutting advance independent of rotation is well known in the art, the use of multiple epicyclical gear trains within the actuation of the machine tool is not well known. Furthermore, the specific limitations of the

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claimed two epicyclical gear trains is not found in the prior art, and no motivation can be found for incorporating the specific gear trains into the machine tools of the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Ross whose telephone number is 571-272-4480. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


dmr


BOYER D. ASHLEY
PRIMARY EXAMINER